Math 212
Requiz 14A

F 21 Oct 2016 / N 23 Oct 2016

Your name: _____

Exercise

(5 pt) Consider the paraboloid $P \subseteq \mathbf{R}^3$ given by

$$y = 4x^2 + z^2.$$

(a) (1 pt) Sketch (roughly) the paraboloid P.

(b) (4 pt) Find an equation for the tangent plane to P at the point $(1, 5, -1)$. *Hint:* To check your answer, ask yourself whether the normal vector for your tangent plane points in the direction you expect based on your sketch in part (a).